Standing Committees of Convocation have been encouraged by the good attendances at recent functions and looks forward to further successful ventures in 1976.

On the night of September 26, Sir Garfield Barwick addressed about 300 people, including many graduates, their wives, husbands and friends, to Edwards Hall for his Newcastle Lecture.

The address given by the Chief Justice of the High Court inaugurated a series under the heading, "Newcastle Lecture", which will present celebrated Australian men and women to Newcastle citizens.

Sir Garfield Barwick, 1975, was planned to Convocation, in conjunction with the University and the Department of Community Programmes. Speaking on the subject "Australia From The Bench" Sir Garfield said, inter alia:

"As yet we do not have in Australia a cohesive society with characteristic, basic norms and standards which it will transmit from generation to generation. The Australian society, to my mind, is still in the process of formation. A reason why the idiosyncratic society has not emerged is that nothing in our history has formed it.

"May we look backwards for a moment in search of historical facts relevant to the growth of society. Some come readily to mind. As citizens of Australia, we have very few years behind us. The societies of Europe and Asia have centuries behind them. Even that of America has many more years of history than have we. We cannot expect national maturity in so brief a time.

"Then, we have suffered the disadvantages of distance and space. We are a long way from the land from which most of our forefathers came—from the United Kingdom and Europe. Indeed, we still are far away that, sporting activity on one side, few events of Australian life stir any recognition in those places.

"We inhabit a continent of vast proportions. The space or distance which separated the early colonists was considerable. It led to the formation of separate colonies. It remains a considerable factor telling against a cohesive Australian society, though oddly enough it has not led to the growth of dialect or of any noticeable idiom.

"The assault in the Dardanelles, creating the tradition of Anzac, did provide an event which might have seemed to be focal to the development of an Australian society. No doubt closer to the event, it seemed to do so. But, as of this time, I do not think it can be so regarded.

"We have succeeded in setting up industrial production on a considerable scale. We have shown ourselves as competent people both in organization and execution of difficult procedures. We have made notable contributions to the increase in knowledge of the world. But, though this sense of achievement is both present and justified, it is not enough on which to build a society of the kind I have postulated.

"We have exhibited a form of nationalism whose real basis is, to my own mind, obscure. At times it is little more than mere national self-assertiveness, or a brash nationalistic self-parade, which, in nations, as so often its counterpart in the individual, springs from a sense of inferiority or from a fear of being ignored or overlooked.

"Though we have had material successes, we must remind ourselves that we have no cultural tradition of our own. We cannot fall back, as can so many of the peoples whose lands are close to ours, upon centuries of tradition and of traditional ways and manner of thought. The strength society gathers for itself from such sources is both obvious and extensive.

"I think we have lost pride in simple and elegant speech. We no longer savour the writing of it. Indeed, nowadays, unless you decorate your speech with a vulgar expletive or a four-letter word, you are regarded as colourless; your speech lacks emphasis. Our children are not taught to understand the structure of the language, nor required to be able to spell its words—not a happy augury for the formation of a cohesive society, where communication between its members is indispensable.

"As a community, where is our rallying point?

"We were unable at the turn of the century to achieve any greater unity as an Australian society than is represented by our Constitution, with its few matters committed to the federal government. Since then the country has become more complicated in a material sense and we have received a great number of people who have migrated to this country from many parts of the world, principally from the United Kingdom and Europe. It is to be hoped that all these will be absorbed into the society and not remain as enclaves within it.

"As of this time we are passing through a phase of extreme individualism. All emphasis is on the individual. Everybody is to do his own thing in his own way, regardless. Children are taught to do their own thing. It is anathema to find virtue in anything done by the preceding generation. They are not encouraged to find the norms and standards of the society of which they must become members: rather, they must follow their own bent. Many find satisfaction in mere revolt, not really having any idea of why they do: and having no clear idea of what they would create for themselves.

"If this trend is carried much further, we shall cease to be a society at all. We shall end up an aggregation of individuals, each bent on his own self-satisfaction and self-aggrandisement: a rabble, with no duty towards one another, with only rights to exert and insist upon.

"Seeing that our society has seemingly not been moulded by events: it would seem necessary that its formation be consciously undertaken. Its standards and desirable characteristics must be progressively found and promoted. Australians need to lose no opportunity to promote their unity as a society; they need to think about the norms and standards of conduct which, being followed, will identify and mark out the Australian society providing the inherent self-disciplines of its citizens.

"Nobody who watches the Australian scene can fail to see that, as a community, we have settled for personal material advantage and, indeed frequently, for something for nothing. The effect of this in relation to the norms and standards of our society is plain enough. The old-fashioned gospel of work and of self-help as a matter of personal pride seems quite superseded. There is little room, it seems, for patriotic self-help, certainly it provides little national driving force."

Sir Garfield added.

On October 25 the annual Convocation dinner in Edwards Hall was attended by 170 people, who appeared to be most appreciative of the dinner and the speeches.

Xavier Herbert, the distinguished Australian novelist, then attached to the University as Writer-in-Residence, was guest speaker for the evening. Following his arrival late in August, he mixed freely with students and members of staff, addressing groups or talking to individuals. While he was a member of the University his mammoth novel, his "magnum opus" as he calls it, Poor Fellow My Country, was published and he received high praise from critics, because of the book's insight into Australian life.

Introducing Xavier Herbert to guests at the dinner, the Warden (Professor Dutton) said that
The dinner was noteworthy for not only Xavier Herbert’s attendance but also the presentation of the Newsletter Award, which the University’s former Vice-Principal, Alan Auchmuty, invited to address the University Council, to which it elects five representatives. It was a year of substantial contribution, by way of innovation or creativity in any field, towards enhancing the quality of life in the community.

Professor Davison said: "It is not necessarily significant that last year’s dinner took the form of a farewell to Professor Auchmuty, and I should like to take this opportunity to express my gratitude to his successors and, in particular, to Professor Dan Conn, whose support to Convocation in previous years was invaluable.

"Although Convocation is an integral part of the University, and is mentioned in the act immediately after the Council — and before the Professors — as being one of the bodies of the University, “shall consist”, nevertheless is a part of the University which is far less self-subsistent than most other parts, and is largely dependent upon the generosity and goodwill of the University Administration in its day-to-day activities; its support is much appreciated.

"But then, of course, another “first” that is marked by this dinner — it is the first occasion on which the Newsletter Award will be presented. And I cannot let the occasion pass without saying what a great delight it is for me personally, and I am sure for all his former colleagues, students and friends who are here, to have Bun and Val Newjohn with us as our distinguished guests and to welcome them with warm regard and affection.

"When I became a member of the Standing Committee of Convocation, Bun Newjohn had already been a member of that body for some years, and it was while he was present on Standing Committee overruled by only one member, that he very kindly agreed to convene discussions on a wide variety of matters. I recall this standing Standing Committee, an act which was potentially one of the most powerful forces on the University Council, to which I was only a member; only the Governor, who appoints six members, has stronger position, and it was Bun’s

Xavier Herbert, guest speaker at Convocation’s Dinner.

view that this gave Convocation an enormous responsibility which he regarded as a task to take more seriously.

"I remember, too, his hand in the drafting of a letter from Convocation to the Chancellor, setting out the qualities it considered desirable in a new Vice-Chancellor, in response to a letter seeking Convocation’s views on this subject, and I noted with admiration his ability to turn vague and prosaic expressions into hope of a well-reasoned statement of academic principles, which I am sure must have had considerable influence on the selection committee, when we consider what an essentially different notion it made.

"And I remember also Bun’s keenness to see Convocation give recognition to those of our graduates who had contributed substantially, through innovation or creativity, to the well-being of the community generally. For that reason I felt it was particularly appropriate, after Bun had retired from the University and from Standing Committee, that Convocation should decide to give his name to this Award. For how many people have contributed as substantially as he, through the encouragement he has given to the fostering of talent in so many fields — music, art, drama, poetry, scholarship — to the quality of the life we are able to lead in this University and in this town?

"I noted with pleasure, that in his retirement, his interests and expertise still range widely, from the elucidation of the intricacies of contemporary musical interpretation, with which he enlivens our evening, to the unsavouring of the mysteries of a more material kind which nowadays attend the payment of our medical benefits.

"For the selection of a recipient of the Newsletter Award, Convocation decided to establish a judging panel made up of people of diverse areas of interest as possible. In addition to the Vice-Chancellor (for his nominee) and the Warden of Convocation, I should like to take this opportunity of thanking the members of the panel: Mr. David Hamilton of the Australian Federation of University Women, Dr. Peter Hendry, a prominent member of the medical profession, Mr. Geoffrey Ives, the President of the Victoria, Loso, New Editor of the ‘Newcastle San’ and a graduate of this University, and of course the Vice-Chancellor, who was happy to act in person rather than send a nominee.

"Convocation decided that it would not appropriate for an Award for creativity and innovation to take the form of anything so mundane as a meritocracy for the mundane. But that is just what it is. The Newsletter Award is a form of a creative work, a different work being done each year. I think you will agree that they have chosen a piece of literature, played a part in the educating of not only of the students who read it, but also of many others and that it should itself take the form of a work of art, a work of literature.

"The decision of the panel of judges was that the Newsletter Award for 1975 should go to Alan Moorhouse.

"It was a matter of pure chance, but a moment of serendipity, when it was announced that the Award this year should have connections with Europe. One of the reasons for this was from the fact that Alan Moorhouse’s father migrated to Australia at the age of eighteen.

NATIONS LINKED

Signe de Vie, which, in French, means “A Sign of Life”, also something like “Saying Hello”, is a reminder that one is not dead, is a new literary publication, in French. It has been initiated by Dr Jean-Paul Delamotte, from the Department of French, under the auspices of TUNRA, the University’s research company. Dr Delamotte explained that the basic aim of the publication was to convey something of Australia and its culture and introduce some Australian writers and artists to a selected group of French-speaking people, mostly in Paris, but for that matter anywhere. Brussels, Geneva, Quebec, Africa or the Pacific. It reached directly 800 writers and artists, as well as critics, academics, newspaper editorial boards, five high civil servants and at least one Prime Minister... also students. The limits were set by financial considerations, but not by any “clinical” attitude. The idea was to try overcoming the handicap of distance as well as the language barrier.

A simple invitation had prompted this venture. Dr Delamotte stated. Even outside the Anglo-American world, interest in French culture and in French cultural achievements was growing. The Nobel Prize given to Patrick White had certainly marked a turning point there. Unfortunately, the Media, both literary and periodical, were sometimes short in this respect, of not as a formulation of a literary policy, of the result of an independent academic research.

The first offering of the French-Australian cultural effort possible for France to serve as a little bridge, a cultural link between the two cultures.

Here, it has a special appeal to students of French. Over there, it is well received by friends and potential friends of Australia.
An account of research he is undertaking into the field of pest control, with particular emphasis on the development of synthetic fungicides and herbicides. The motivation behind the work is to make contributions to our understanding of the chemical features of fungicides and herbicides which are necessary for biological activity and hopefully to other design and more economic compounds.

Of particular significance is the fact that, as a result of our work, we will be able to determine the mode of action of the chemicals, a matter which is of critical importance in determining their effective use in agriculture and horticulture. The research involves principally synthetic organic chemistry and the preparation of related compounds by physical measurements of their properties which are necessary to elucidate their structure. Various kinds of spectroscopy (IR, UV, NMR, Mass) are utilised in the identification and verification of the structures of the new compounds. Following on from our synthetic programme we will help of biologist colleagues, who will carry out the biological testing of the chemicals either against a variety of plant pathogenic fungi and bacteria or against several plant species in the case of herbicides.

It is probably best to illustrate the kind of effort involved by giving some examples of some of the successes we have had over the past nine years or so. I will give three examples.

The first example deals with the recently developed and still promising fungicides which I synthesised both here in Britain and in research at Newcastle University. These fungicides, as the name implies, protect those parts of a plant which are covered by the deposit of the Plant Growth Substance and are utilised in the identification and classification of fungicides.

The second example comes from our herbicide programme. In the late 1960s a new group of chemicals was discovered in Britain which had unique herbicidal properties. They were the diphenyl ethers, diquat and paraquat. These compounds desiccate all green plant tissue with which they come in contact and are rendered non-growing. This is a very good example of how the combined efforts of chemists, benchmen and biologists can bring about the solution to problems of this type.

The third example involves synthetic fungicides. Systemic fungicides are compounds which are taken up by the plant via roots, stems or foliage and are translocated in the plant system. They act directly or indirectly on a pathogen in the plant tissue. They are a recent innovation to the commercial fungicide scene, the first compound being marketed in the late 1960s. Our contribution to a new series of very active systemic fungicides was made in 1971 when a joint research project was initiated at the University of London, Wye College. I was attached to the Plant Growth Substance and Systemic Fungicide Unit of the Agricultural Research Council by Professor Dickeson and the Director of the Wye College Research Unit of the Agricultural Research Council by Professor Wain. I returned there for six months as Visiting Professor in 1974.

We began in 1971 an extensive investigation of the chemical features of the systemic fungicides which are responsible for their systemic properties and in this work we have been associated with the Wye and Newcastle since then. We have discovered at Newcastle a new series of very active systemic fungicides from this work, the best of which protect seedlings from mite damage at concentrations as low as 1 p.p.m. At present, however, we do not know the mode of action of these fascinating compounds. Much work remains to be done.

Our research would not, of course, have been so successful without substantial financial support from the Research Councils. Our research has been conducted on related compounds. We embarked on an extensive synthetic programme following by biological evaluation of these new compounds. Most of the initial biological testing was done at the Biological Research Unit of the Division of Plant Industry in Canada. As a result of this work we now know with some precision the necessary features and properties of the compounds required to be active against the fungus of mould and pathogen type. We also know that the systemic fungicides have to be treated with one section of the photosynthetic mechanism in plants.

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THE GAZETTE
DECEMBER, 1975

SMALL FIRMS STUDY

Professor B. J. Johns and Mr. W. C. Dunlop, of the Department of Economics, attended the 5th Conference of Economists in Brisbane, among other places in November to be present at the International Symposium on Small Business in Tokyo.

The reason behind their travelling is the research they are pursuing into the effects of Government economic and financial policies upon members of the small business sector in Australia. Early in 1973 Professor Johns and Mr. W. J. Shepherd made comments to a Senate Committee on death duties that have particular relevance to small firms. Kalamos (Aust.) Ltd then suggested to Professor Johns that a team from his Department might engage in a major investigation into the economic position of small business undertakings. When the Federal Government's Taxation Review Committee (under the chairmanship of Mr Justice Aspery) heard of the academics' interest in small firms, it too, suggested that relevant information be gathered.

This curiously prompted Professor Johns and Mr. Shepherd, late in 1975, to organise a monumental postal survey of 20,000 small business firms in Australia.

Questions relating to taxation were asked to 10,000 small firms and questions relating to a variety of matters were asked to all of the 10,000. The survey elicited usable replies from 1,259 small firms.

Now the team has begun the job of analysing the information given in the replies which was contained in 12,000-odd tables. This task was eventually accomplished by the Computing Centre, which prepared the questions and the questions were published. The team was interested in independent, Australian-owned enterprises which met the following criteria: 100 or fewer employees; 101 or fewer managers, salesmen and saleswomen; 101 or fewer clerical employees, secretaries; 101 or fewer employees in manufacturing, transportation, construction, and in motion pictures. Only firms which met all of these criteria were included in the survey.

The survey of small firm economics was unique in Australia. The only similar survey released in England in 1971, bears a very similar title, "Small Business in England 1971: The Report of the Research Committee on Small Firms".

Submitted to the Taxation Review Committee last February, the report of Professor Johns and Mr. Shepherd on taxation, and the small firm consists of 218 pages, plus appendices, and makes recommendations concerning reforms of the system of taxation employed in respect of small business enterprises and measures to assist them.

The authors feel that the small business sector in Australia has been neglected as an area of economic investigation. About 40% of the private workforce is employed in enterprises which can be described as "small". They believe that there is a need to examine the effects of the present tax system upon the viability of small firms and upon their capacity to grow.

"New enterprises almost invariably start their lives as small firms and it can be regarded as an essential feature of a dynamic competitive economy that the more efficient of these new small firms should have the opportunity to grow eventually into large enterprises.

"Work on the Hugel study surveyed the past experiences of a large number of small firms and it was found that 14% had experienced difficulty in obtaining long-term finance during the two years preceding the survey, a period in which the level of economic activity was high and credit was readily available. Since then, however, economic conditions have worsened.

The National Small Business Bureau, of the Department of Manufacturing Industry, provided funds through TUNRA so that Professor Johns and his team could extend their investigation to determining, by the use of a multiple regression technique, the factors influencing the growth and the extent to which the credit squeeze had handicapped members of the small business sector.

Early this year, in-depth interviews were conducted with about 150 small firms located in New South Wales, Victoria and Queensland. The research officer, called on chief executives and asked confidentially with them about their financial and economic problems. Results arising from the interviews, including the team's assessment of why small firms are unable to obtain outside funding, have been published in a report. This report, of almost 300 pages, has just been sent to the National Small Business Bureau.

Meanwhile, in response to a request from the Federal Government's Committee to Advise on Policies for Manufacturing Industry for a submission on the small business sector, a 2-page report, "The Small Firm in the Australian Economy - A Study in Depth", was written. It dealt with the place of small business enterprises in the economy, the role of the small business in the economic system, and its appropriate objectives and policies to be pursued.

The special research into taxation and the small firms was conducted by Messrs Dunlop and Shepherd, and the Taxation Review Committee, which together contributed $27,000, while the National Small Business Bureau provided $15,000 towards the cost of the investigation into why small firms found it hard to obtain capital.

CAMPUS HOME FOR MONKEYS

In a modest way research into non-human primates has begun at the University of Newcastle. After two years of careful planning and preparation the Psychology Department took delivery in September of six pig-tail macaques (Macaca nemestrina). These will be followed soon by a small breeding colony to be housed (pending construction of the Faculty of Science Animal House in the former Animal House at the Mater Hospital). The animals will be used for research into the role of non-taxable, and in addition fresh nuts, fruits and vegetables.

The social life of the colony, which can be observed for some time now, is high and credit was readily available. Since then, however, economic conditions have worsened.

The dominance hierarchy is well established and the animals are able to live together without any other animal to eat until he has finished. It is hoped that the proposed facilities in the new Behavioural Sciences Building will enable undergraduate psychology students to gain valuable insights into the social life of man's nearest neighbour. It is becoming apparent that in the long term teaching will profit as much as research.

The research grant on which the animals were purchased is concerned with what happens in an organism during psychological stress and ways of coping with the stress of illness. One does not need to document the fact these days that psychological stress can be as potent as physical stress and, in some instances, is more damaging to the organism. Over many years, extensive research has been carried out on the effects of coping with psychological stress, using the laboratory rat as a subject. These studies have provided a relatively insensitive starting point for such research, and it is not surprising that many coping methods fail when extrapolated from the rat to the human case. It is trying to determine what will prove to be useful coping methods in man the non-human primates can be profitably studied. It is to be hoped that the present colony will help us to assess more effective ways of dealing with psychologic stress in man.

M.G. King
Professor of Psychology

THEATRE IN DEMAND

The University's Arts Drama Theatre is a popular setting for stage productions. It is used by University departments as a venue for lectures during the day, after lecturing hours and in the evening to be present at the Arts Drama Theatre.

The contemporary theatre company made its theatre for the first time, "Roseannata and Guidenston Are Dead", by Tom Stoppard, and in the year, six one-act plays.

In May, the May Arts Council staged the annual Drama Festival for amateur companies in the theatre.

Talented actors from the National Institute of Dramatic Art visited the theatre in July to present "the handsomest 18th century comedy of them all", "The Country Wife", by William Wycherley.

(NIDA has made it a practice for the last three years to bring productions involving its final-year students to the university.)

New Theatre returned in November with a production of "Femal Transport" by Stress Gough.

"The musical performances given in the Arts Drama Theatre were two recitals of "classical" music by the Newcastle New Orleans Jazz Band and a concert by The Jazz Coop, an avant garde band from Sydney.

The Department of Community Programmes booked the theatre a venue for public lectures, including the 1975 Morphet and Eddy Harris series.

Other hires included a dance company, a photographic society, Convocation, film and even a brass band.

UNIVERSITY CO-OPERATIVE BOOKSHOP

Membership of the Co-operative is open to all including graduates at the cost of one share (currently $5 but $10 from January 1, 1976). While anyone may be a customer of the Co-operative only members obtain an annual cash rebate on their purchases. The rebate paid to members in 1975 was 18% of the total cost of their purchases during the year -- that means that, after rebate, nearly all books cost significantly less at the Co-operative than they do in other bookshops. Not only does the Co-operative offer the best prices, it also offers a more comprehensive service -- today accounts, mail order, special orders and a subscription service for magazines and journals.

For professional people working away from the main centres of population, the Co-operative has a large variety.

But the Co-operative does not sell only student textbooks and academic and technical book for the professional man; it also sells a wide range of general books from the most expensive folio art reproduction hardbacks to paperbacks and all kinds.

The Co-operative has 26 branches in three states, and two Federal Territories. You can join by sending the price of one share to any branch and the mail order department will attend to your needs wherever you are, so try not to become a member and make the most of it! The mail order department is at 76 Bay Street, Sydney.

Professor Johns and Mr. Dunlop.
CHILD CARE CENTRE

Staff members and students of the university and Newcastle College of Advanced Education who have, or are hoping to have, young children, are drafted by the decision to build one of the most existing Community Child Care Centres in Australia in the university, Dr. E. C. Briggs, Chairman of the Management Committee for the centre, has kindly written about the genesis of the project, the Architect's proposal and the Committee's plans for its administration.

Construction of the Community Child Care Centre at the University of Newcastle has now begun on a site between Rankin Drive and Car Park No. 2. It is expected to open in first quarter 1976.

Agitation for the present Centre may be traced back to April 1973 when a meeting was convened to consider the need for child care facilities on the university campus, and when a sub-committee of the Committee was appointed to explore the alternatives available.

It was evident that neither the University Council nor the Newcastle City Council could provide facilities unless loans could be raised or levies imposed. The Committee, however, thought to provide a non-profit making Centre in which fees could be kept to a minimum. Funds had been invested, this would not be possible.

Accordingly the Australian Government was approached and assistance was sought under the Child Care Act of 1972. The Minister for Education, the Honorable K. Bradley, advised that an application would be considered only if three basic criteria were met. First, the Centre would need to be open to the surrounding community generally as well as to the community; second, it would need to give priority of access to children of special need, and, third, the site should be readily accessible to the general community outside the university.

The University Council set aside a two acre section facing Rankin Drive, allowing ready access while removing the need to drive onto university roads. At the same time it will be possible for staff to park in the university car park within 50 yards of the Centre.

A questionnaire, circulated in late 1973, revealed that more than 120 children could be expected to use the proposed Centre, and as a result, an application was submitted to the Australian Government. This was subsequently granted for the construction of the Centre. The Australian Government decided to approve including $19,073 for site works. It is envisaged that the Director of the Centre, working under delegated powers, will be appointed in January 1976 after the construction is complete.

The Centre is designed to accommodate 60 full day children and the cost of equipment.

At present the day to day running of the Centre is controlled by a Management Committee, comprising representatives of the University Council, the SRC, University staff, the Newcastle OCA, and the Newcastle Child Care Centre. However, a need for this Committee to be reconstituted on a different basis.

The Centre is situated on approximately 60 full time children, but in that many children will not be enrolled full time, there will be approximately 150-200 children. The Centre will be open for at least eight hours each day, from 8.30 a.m. to 3.30 p.m. The Australian Government will provide $30,000 for each trained staff member, and $100 for each assistant.

Despite these subsidies it is anticipated that the Centre will be forced to cover at least half of the staff salaries, up to $30,000, from fees or other sources.

Finding a suitable site was one of the most difficult problems faced by the Committee, and this was decided as "one of the most existing Child Care Centres in Australia". The architects have sought to plan a Centre characteristic of a family home rather than a kindergarten; rooms are carpeted or tiled. Overhanging roofs for a nursery, a cot room, three large play rooms, a kitchen, a laundry, a dining room, offices for the Director and Sister, and five toilet blocks.

Parking facilities in which either parent is root in their empirical thinking. This shows up as a tendency to make judgments in terms of a particular aspect of the total textual data. The child's thinking is fundamentally different from that of adults, apparently because of the limitations built into their cognitive processing apparatus. This confines their view of the world and can lead to difficulties in communication between children and adults and teachers. Many examples of children's inappropriate or authoritarian behavior, as defined by the adult - can be traced to basic limitations in the child's thinking capacity.

Most children's thinking at this stage (unless prompted) will not see the significance of the work already done by the child. The Centre will not be able to reproduce the dimensions and working it all out again. This will probably result (assuming the child is not encouraged) in a situation where the child would not be able to produce the kind of generalisation so that an application would be considered only if three basic criteria were met. First, the Centre would need to be open to the surrounding community generally as well as to the community; second, it would need to give priority of access to children of special need, and, third, the site should be readily accessible to the general community outside the university.

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PERSONAL PHYSICAL FITNESS

Members of staff of the University and Newcastle C.A.E. are seeking the healthy life by turning up for keep-fit classes in the Auchenmuty Sports Centre on Mondays, Wednesdays and Fridays at noon. Dr David Parsons, Head of the Department of Physical Education at the C.A.E., who is the instructor, explains the raison d'etre for the classes:

To many readers the notion that personal physical fitness could be of concern to university staff members might be somewhat surprising. More of concern, however, has been the rising incidence of heart disease in our communities; the rapidly mounting account of fatalities and near-fatalities in the "over forty-years group"; and the ever-present knowledge that our modern society is moving towards an increasing leisure time orientation away from demands which would allow us to gather a degree of the physical robustness of our forebears.

Two related developments on the University of Newcastle campus have occurred this past year. They are in line with concerns observed elsewhere, both in activities and overseas. I refer to both a faculty keep-fit class and a similar class for faculty wives. On this occasion my remarks will be directed to the men's programme.

Eighteen staff members make up the keep fit class thus far. The class has met at noon-time for an hour, three days each week. At the end of the first year there are indications of growth in numbers as new members are still arriving. Only one or two members have left the group and of these people it is worth noting they are still exercising vigorously in our group programme. The meeting place is in the splendid Auchenmuty Gymnasium, a facility second-to-none for the purpose. When weather conditions are favourable the class is held outdoors on the University Oval No. 2 which is adjacent to the gymnasium.

From the outset let me say we follow a simple and straightforward programme of activities commencing with a slow jog-cum-run (or quick trot, if you like) for up to 1,000 metres — and that is two laps of the oval as close to the fence as possible. Then we employ the introductory phase of the class time to promote heart-beat acceleration, cardio-respiratory fatigue and to promote circulation. This may involve the performer in ten minutes or so continuous activity and is followed by a rest period of a minute or so, some form of breathing activity and a gentle recovery phase.

The group assembly, in a loose formation, is our signal to commence a table of exercise. We devote attention here to specific muscle groups, and parts of the body requiring particular exercise. For ten to fifteen minutes we work at the table of exercise always working against ourselves and trying to avoid competition against each other. We try to alternate activities which will stimulate heart rate and respiration and those in which we promote specific muscle strength or joint flexibility.

Finally, the group assemble on the volleyball court and we participate in a group team game which emphasises reaction and adjustment, cooperation and competition. It is pleasing to report that at the end of a year we are playing a brand of volleyball which is skilful, vigorous and exciting, both to watch and to play. About twenty minutes is devoted to the game. This leaves us ten minutes or so to shower and change and resume the busy schedules of our involvements.

It is wise for all "middle aged" persons to check with their own medical authority before commencement of any vigorous physical training. Only in this way can a person be confident that from a slow beginning progressive increases may be made towards a vitally demanding personal fitness programme. Secondly it is necessary to be honest with oneself in the participation of the activities. Too many individual and personal dimensions exist to permit inter-personal competition in this participation. To try to "out-perform" one's friends in this endeavour is to court disaster. One's physique, for example, may suggest no such zealous participation for many, many months. The benefits and returns for proper commencement and careful orientation are too important to waste in poor initial conflicts. The more appropriate conflict however is two-fold and related to each individual, and contained within the answers to two questions:

1. Am I performing the exercise appropriately?
2. Is the performance demand I am making appropriate?

Clearly the benefits of regular participation in a vigorous physical training programme orientated towards personal fitness and health are contained, at least in part, in personal reactions to such a programme. If one feels the programme is succeeding, if one feels better for such participation; if one guesses he is able to sustain himself in his daily life and vocational activities, then there is positive, favourable orientation towards continuing the participation. This draws attention to the salient feature of the faculty "keep fit" class we have conducted here in Newcastle. The real benefits have been interwoven with group participation. Truly great champion athletes have performed strict regular training sessions on their own. The average citizen finds some difficulty in maintaining the pattern of participation. On your own there is always a reason WHY you should NOT exercise. Somehow the group syndrome negates this orientation. With others present it somehow seems simpler, easier to participate and "put out" with more zeal than one would alone. Yet the same group also stops one from over-participation, over-extending that intra-personal limit.

Research in physical fitness factors bring out several interesting conclusions. Definitive research clearly points to the necessity for strength items in a training programme. Four types of strength factor have been identified, namely:

* static strength, i.e., lifting a heavy weight.
* dynamic strength, i.e., pull-up on an horizontal bar.
* explosive strength, i.e., standing vertical jump.
* strength of trunk muscles, i.e., leg lifts or half sit-ups.

Your personal keep fit programme ought to weigh heavily in this area.

Next factor identified, which may surprise many readers, is the factor of flexibility. When coupled with speed of movement one has a skill worth inclusion in all physical training plans. Consider the following five items:

* extent of flexibility which is the ability to stretch muscles of, say, the trunk and back, as far as possible in a forward or backward lateral direction.
  * dynamic flexibility — here one repeats rapidly flexing movements. The focal point here is upon the resiliency of the muscle groups to recover from the stresses.
  * speed of change of direction — a dodging run called the potato race.
  * running speed — short dashes from ten metres to about fifty metres.
  * speed of limb movement — moving an arm or leg as rapidly as possible, preferably where little skilled movement is involved.

Again your programme would do well to feature these items.

The factors identified beyond strength and flexibility are not as dominant in any analysis of physical fitness factors. They consist of balances static, dynamic, and object balancing coordinations — a multilimb-interaction, sometimes including a gross body movement endurance — the ability to maintain a fairly high maximum effort over an extended period of time.

In building your own keep-fit programme may I suggest you give consideration to three basic principles.

**PRINCIPLE No. 1:** Consider the notion that personal physical fitness is task specific, that is to say, ought to relate to whatever motor skill task will dominate your leisure time. If it is to be gardening so be it. Build in activities similar to those you employ in your gardening operations and which, at present, leave you sore and tired.

**PRINCIPLE No. 2:** Consider the present state of your physique; your background of physical training and what you want from your programme. My advice here is to caution against rapid changes — it simply doesn't happen that way.

**PRINCIPLE No. 3:** Balance the budget! Increasing exercise will surely increase your appetite. Do not get caught on that vicious round-a-bout! Try to maintain your less-than-usual diet whilst operating on a more-than-usual training programme.

There is no magical guarantee resulting from participation in a keep-fit class similar to that we have undertaken this year in Newcastle. Yet eighteen or so staff members will tell you they enjoy the experience, and plan to continue their participation. If education is a search for understanding and truth, who is to say we have not added a worthy dimension to that search? But we do not make such a claim: we have simply enriched our university lives in a group experience which stresses personal physical fitness — nothing more.

Assoc Professor Colin Keay (Ext. 234) has undertaken to serve as contact person for enquiries.